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M.D./Ph.D. Perspectives

University of Virginia

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Dates to Remember

October 16, 2002
Research in Progress

October 26, 2002
MD/PhD Wine Tour

November 4, 2002
Distinguished Speaker Seminar Series
Dr. Hong Wu, UCLA

Conversation with Dr. Garson

Among the new faces being welcomed to the University of Virginia this fall is Dr. Tim Garson, newly appointed Dean of the School of Medicine. Since his job places him at a crucial position in both the training of physicians and overseeing research, we sought his opinions on the role of the M.D./Ph.D. program at this institution.

In our recent conversation, Dr. Garson emphasized that the very reason for academic medical centers to exist is to use the combined resources of the hospital, medical school, graduate school, and research laboratories to innovate and improve communication to achieve common goals. As he describes it, the better we are able to connect all of these aspects, the more successful we will be in bridging science to the bedside and improving care for patients. "To be able to integrate information from cel to bedside and back again is a tall order," he said, "and I suspect that the M.D./Ph.D. is in a perfect position to make it happen."

In terms of what he sees for the future of UVA, Dr. Garson states that he would like to see more focus on the continued development of translational research and translational programs. He defines translational research as research on a specific problem that when solved, goes directly to the bedside, usually as a drug, device, or vaccine. Translational programs are broader in scope, including everything from basic research to translational research to clinical trials, with the eventual goal of improving clinical medicine. Dr. Garson envisions a translational research institute to support development of this research and these programs, the foundation of which already exists among successful researchers in many disciplines who are collaborating to affect clinical medicine. In its infancy, this institute would not be a separate entity in a separate building but rather an infrastructure designed to improve interactions among experts across grounds from the most basic to the clinical. As an early example of easily enacted changes that could make this institute a reality, Dr. Garson envisioned the development of various seminar series involving investigators from disciplines such as

(Continued on page 2)

Introduction to Grant Writing

Writing grants is an essential component of a researcher's job. Graduate school is a great time to become familiar with the process of grant writing by applying for pre-doctoral fellowships. The process can be fun if you start early and maintain the right attitude. The first place to begin is to know where you want to send your grant and the funding agency's requirements. There are databases to help you identify where to target your grant, and some of these sites are included here. The next step is to outline your grant. There are basically four main components to a grant, the Specific Aims, Background, Preliminary Results, and Experimental Design. Of these four components, the most important sections of a grant are the "Specific Aims" and "Experimental Design." Although these are

(Continued on page 2)

Dr. Garson, cont.

chemistry, physics, math, and medicine. Another aspect of this institute that could be implemented early includes new courses offered in various areas, including a proposed course on innovation offered to both students and professionals in all schools across grounds. A larger emphasis on translational training, beginning with a proposed fellowship program for M.D./Ph.D. graduates, would also be a part of this new institute.

Overall, Dr. Garson would like to see a smoother path for research to be taken from the bench to the bedside, a goal he shares with all of us in the M.D./Ph.D. program. Interestingly, his own research began with a clinical question, sudden death after cardiac surgery, moved to the bench in the study of myocardial scarring, and then went back to the bedside. He would like to facilitate a path of cell to bedside to cell for UVA researchers through support of new and existing programs like the M.D./Ph.D. program. With that in mind, when asked what he would like to share with all the students in the M.D./Ph.D. program, he said simply, "I'm proud of you. Keep at it – it's tough. You're do-

Grant Writing, cont.

the most critical sections, a good place to begin writing is with the "Preliminary Results" section, where you may want to first ask what data you have or need to support your "Specific Aims." The "Specific Aims" is the blueprint of a grant, where your hypothesis is stated and you make your case to the funding agency why they should care about your research. (Why is this research innovative and how will I address it?) Each of the aims should collectively test the hypothesis but at the same time each aim should be independent of one another. In the "Experimental Design" section, the experiments should be designed to definitively answer the specific aims with a "yes" or "no." Lastly, the "Background" section should provide literature that supports the hypothesis of the grant in a specific and brief manner. Overall, you want to convey excitement about your research. And if you're not successful the first time, take those reviews about your grant, consider the recommendations, and incorporate the suggestions in your next grant.

contributed by Rumey Ishizawar

Grant Writing Resources

Databases listing funding opportunities:

1. GrantsNet – www.grantsnet.com
2. IRIS Illinois Research Information Service – http://gateway.library.uiuc.edu/iris
3. NSF funding opportunities – http://www.nsf.gov/home/grants/grants_opps.htm
4. Science Wise Alert – http://contents.sciencewise.com/alertservice

Funding agencies to target:

1. American Heart Association
2. American Cancer Society
3. American Association for Cancer Research
4. Department of Defense (DOD Grants) – breast cancer, prostate cancer, ovarian cancer
5. Look into other specific societies and organizations in your field of research.

Searchable databases of abstracts of existing grants:

1. Community of Science – http://fundedresearch.cos.com
2. CRISP (Computer Retrieval of Information on Scientific Projects) – http://www-commons.cit.nih.gov/crisp
3. CRIS (Current Research Information System) – http://cristel.nal.usda.gov
4. NSF Awards – http://www.nsf.gov/home/menus/funding.htm http://www.fastlane.nsf.gov/a6/A6AwardSearch.htm

(Material Source for this article comes from the AACR 5th Annual Grant Writing Workshop for Associate members sponsored by the AACR Associate Member Counsel.)

MSTP Fall Retreat

contributed by James Thomas

The University of Virginia's MSTP program made clear its commitment to fostering collegiality among students and faculty this past August 9-11. It was during this time that MD/PhD students along with a select number of faculty members met together at Concord Retreat in West Virginia. The annual event continued the tradition of bringing students and faculty together both to engage in academic discussion and provide an atmosphere of fun and friendship. Equally important, the retreat served to welcome the new first year class of MD/PhD students to the program.

Clockwise from top left: MD/PhD student Elaine Bucheimer enjoys horseback riding; Lisa Boyette gets a lesson in fly fishing; Program director Dr. Gary Owens roasts marshmallows at the campfire; Several students participate in a low ropes course

The weekend started off with a presentation given to the students by Heather Ferris. Heather, who works in the lab of Dr. Margaret Shupnik, gave an outstanding talk about her current research involving the control and release of sex hormones in the hypothalamus and pituitary. The presentation was an excellent opportunity for exposure of students to some of the ongoing research at UVa and provided a forum for critical scientific thinking.

After the presentation, the students convened in their cabins to enjoy a casual, social atmosphere. Here, older students shared advice and their experiences in research, while younger students were able to glean wisdom in a friendly, relaxed environment.

The next morning there was little time for rest as, after a quick breakfast, the students were off to enjoy a day full of activities provided by the resort. Students selected among two activities, paintball and horseback riding. Both activities allowed students time to have fun and enjoy both the facilities of the Concord Resort and the beautiful scenery of West Virginia.

Lunch followed, after which four faculty members lead a lively discussion on funding opportunities and grant writing during graduate school. The faculty members present were Dr. Randall Moorman, Dr. Sue Parsons, Dr. Joyce Hamlin and Dr. Gary Owens, the director of the MD/PhD program. The discussion was an extremely informative, engaging conversation that was a favorite among students and faculty alike.

"The opportunity to meet and interact with such faculty was truly a treat," said second year MSTP student Brad Podd.

But this retreat continued to serve not only the academic but also the adventurous, as later that afternoon students played either paintball or participated in a low ropes obstacle course. The course was a special activity requiring group cohesiveness and teamwork in order to accomplish certain tasks and solve novel problems.

After the second activity session and dinner, students gathered to hear the last of the weekend presentations. Nima Mosammaparast, an MSTP student from the lab of Dr. Lucy Pemberton, gave an excellent talk concerning nuclear import proteins and their potential role in transcription and chromatin assembly. The presentation was another means of involving students in scientific inquiry and current research.

The last night of the MSTP retreat was a time of relaxation and friendship. Students, young and old, gathered around a campfire to enjoy what was a beautiful West Virginia night.

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M.D./PH.D. PHOTO ALBUM

Congratulations to:

Oliver and Kelli McDonald
Married June 30, 2001

Leah Waters
Adopted from Guangdong Province, China
to Jane Cornelius and Nick Waters
August 21, 2001

Brandon Kremer and Laura Adang
Married July 14, 2001

Felix Monroe Sykes
Born to Paul and Ginny Sykes
March 15, 2002

Michael and Laura Cruise
Married October 20, 2001

Jeffrey Lysiak and Jennifer Kirby
Married August 4, 2001
Thomas Bernard Lysiak
Born June 3, 2002

National M.D./Ph.D. Conference

Beautiful Snowmass, Colorado was the site for the 17th Annual National M.D./Ph.D. Conference held between July 12-14, 2002. Stacey Trotter and Joe Mettenburg represented the University of Virginia M.D./Ph.D. Program at the student conference. Program director Dr. Gary Owens attended the concurrent director's conference, while Program Administrator Nancy Arllen attended the administrator's conference.

The purpose of the conference was to give M.D./Ph.D. students from across the country the chance to interact both professionally, by giving talks and presenting posters, and socially, by spending time together during meals and after hours. Keynote speakers included Francine Benes, M.D., Ph.D., Francis Collins, M.D., Ph.D., Charles Janeway, M.D., Joan Bathon, M.D., Philip Needleman, Ph.D., and C. Ronald Kahn, M.D. Conference talks focused on medicine and science, with some career opportunity talks by panels from varied backgrounds. Dr. Collins presented a talk on research ethics which produced lively discussions, and rumor has it he could be heard singing and playing on his guitar songs about DNA and being an M.D./Ph.D.

A typical day for the participants began with breakfast at the hotel followed by a series of talks given by students. Lunch came next, a perfect chance for students to interact with each other informally. The afternoons held more opportunities for participants to learn from each other with poster sessions and keynote addresses. One afternoon participants were free to explore the beautiful surroundings by mountain biking, hiking, shopping, fishing, chairlift rides, rafting, kayaking, etc. Evenings were spent meeting new people from all over the country, all with similar professional interests, and fostering new friendships and perhaps new professional collaborations.

Representative Stacey Trotter said of her experience, "Overall, it was one of the best experiences I've had yet as an M.D./Ph.D. student. I really appreciated the feeling that I'm not alone, and that people are going through this all over the country."

University of Virginia M.D./Ph.D. program Director Dr. Gary Owens served on a panel who spoke to other program directors at the director's conference. Stacey Trotter reports, "For the rest of the trip, whenever a director found out I was from UVA, they said how lucky I am to have such an innovative and dedicated director." Everyone involved in the M.D./Ph.D. program at UVA already knew this, but hearing from other directors is always encouraging.

Students interested in being representatives at the conference should note that this year's participants were chosen based on interest and dedication to the M.D./Ph.D. program.

contributed by Stacey Trotter

Honors and Awards

- **Mark Lindsay** received the Ann O'Brien Leone Scholarship from the University of Virginia Fund of the UVa Alumni Association given to a student who loves the University of Virginia and has a passion for scientific research.
- April 29, 2002 GBS spring symposium poster award winners: Steve Want (first place), **Shah Khan** (first place), **Rumey Ishizawar** (third place).
- **Shah Khan** received the 2002 Randolph Whitfield Scholarship, established in memory of Mr. Whitfield's parents, James Bryan Whitfield and Margaret Hayward Randolph. The scholarship is awarded to a student in the MD/PhD Program preferably doing research on the human nervous system.
- **W. Shawn Carbonell** won the graduate Raven Fellowship through the University's Raven Society and was a guest of honor at the Annual Raven banquet on April 11, 2002.
- New class member **Steven C. Smith** was selected for the Alan Jawarski Memorial Men in Science Award, a new distinction at his alma mater, the University of Georgia. The award was particularly memorable because it was named for Steven's introductory biology professor that passed away a few years ago.

2000-2002 M.D./PH.D. STUDENT PUBLICATIONS

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Welcome New Students!

(standing, L to R)

Davis Sim	University of California
Mark Fitzgerald	University of Scranton
Matt Alexander	Duke University
Lisa Boyette	Virginia Commonwealth Univ.
Whitney Stevens	Johns Hopkins University

(kneeling, L to R)

Rachel Kassel	University of Georgia
Brooks Broderick	University of Texas, Austin
Kori Wallace	Arizona State University
Steven Smith	University of Georgia

RETREAT, CONT.

Overall the trip was enjoyed by both students and faculty. It was a great means of fostering faculty/student relations while promoting cohesiveness and collegiality among the students of the MSTP program. The commitment of the program to its students and their well-being was clear from the effort put in to organize the event. Joe Mettenburg, Rumey Ishizawar, and Meena Kumar were responsible for organizing and planning the retreat. From the reactions of both the students and the faculty involved, it was clear that the annual MSTP retreat was yet another victory in a long line of successes. With the excellent group of first year MSTP students aboard, the successes will likely continue for years to come.

GOOD LUCK TO OUR 2002 GRADUATES

Mana Parast, M.D.,Ph.D.
Pathology, Emory University

Rich Pierce, M.D.,Ph.D.
General Surgery, Washington University, St. Louis

Rob Scoggins, M.D.,Ph.D.
Internal Medicine, Vanderbilt University

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Comments and contributions are welcome.

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